

REMARKS

This amendment is responsive to the Office Action of January 25, 2008. Reconsideration and allowance of claims 1, 3-6, and 8-19 are requested.

The Office Action

Claims 1, 3-6, 8, 9, 11-13, 15, 17, and 18 stand rejected under 35 U.S.C. §102(e) as being anticipated by Edic, et al. (U.S. Patent Application 2004/0136490 A1).

Claim 18 stands rejected under 35 U.S.C. §102(b) as being anticipated by Rodet, et al. (U.S. Patent Application No. 2002/0131650 A1).

Claims 10, 14, and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Edic in view of Chen, et al. (U.S. Patent No. 7,113,623).

Claims 1-18 stand rejected under 35 U.S.C. §112 second paragraph as being incomplete for omitting essential steps.

Claims 1-18 stand rejected under 35 U.S.C. §112 second paragraph as being indefinite.

Claim 14 stands rejected under 35 U.S.C. §112 first paragraph as failing to comply with the enablement requirement.

Claims 3, 4, 9, 14, and 18 have been objected to as containing informalities.

The Present Amendment

The claims have been amended to address the §112 issues raised by the Examiner and to place the claims in better form for USPTO examination.

Claim 1 calls for separating an estimated motion of parts into a non-linear component caused by contraction of the object, and a linear component caused by rotation of the object. Edic fails to show this claimed aspect. Edic subtracts adjacent views from a phase of interest view to generate a differential signal that represents the motion of the object between the two views. (paragraph [0069]) This action, however, does not parse the motion data into non-linear and linear components. It is therefore respectfully submitted that **claim 1**, and **claims 3-6, 8-16** and **19** dependent therefrom, now distinguish patentably and unobviously over the references of record.

Claim 17 has been placed in independent form. Claim 17 calls for generating a low resolution volume image from projections at a selected cardiac

phase, and forward projecting the low resolution 3D image or centerline into each projection. A motion correction matrix is then determined and applied to each angiographic projection. Finally, the motion corrected angiographic corrections are reconstructed normally to generate a 3D image in the selected cardiac phase. By contrast, Edic drives a warped reconstruction grid 106 to reconstruct the 3d image in the selected phase. Accordingly, **claim 17** is not anticipated by Edic.

Claim 18 has been amended for greater clarity. It is therefore respectfully submitted that the §102(b) rejections over Rodet and Edic have now been obviated.

Similarly **claim 18** calls for motion correction of the projection images, which motion corrected projection images are reconstructed simply into a motion corrected volume image. The complexity of reconstructing with a warped reconstruction grid 106 as in Edic is avoided. It is therefore respectfully submitted that **claim 18** now distinguishes patentably and unobviously over the references of record.

New **Claim 19** calls for creating a transformation matrix that transforms the three-dimensional volume image from one phase into another. Edic fails to show a transformation matrix. It is therefore respectfully submitted that although patentable by virtue of its dependency on claim 1, **claim 19** further distinguishes patentably and unobviously over the references of record.

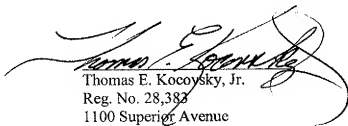
CONCLUSION

For the reasons set forth above, it is submitted that all claims distinguish patentably over the references of record and meet all statutory requirements. An early allowance of claims 1, 3-6, and 8-19 is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, she is requested to telephone Thomas Kocovsky at (216) 861-5582.

Respectfully submitted,

Fay Sharpe LLP

A handwritten signature in black ink, appearing to read "Thomas E. Kocovsky, Jr.", is written over the printed name and address. The signature is stylized with a large, sweeping loop at the end.

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